Recombinant DNAL1 protein (His tag)

Catalog Number	547396
Synonyms	LC1
Species	Human
Expression System	E. coli
Accession	Q4LDG9
Molecular Weight	Predictes a molecular mass of 23.05 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 25 kDa band.

Product Information

Sequence Region	2-190
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 2-190 aa (Q4LDG9) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Dynein Axonemal Light Chain 1 (LC1) Fragment (aa 2-190) is a high-purity protein designed for studying ciliary motility and mechanosensory regulation. This fragment fully encompasses the LRRCT functional domain, making it an ideal tool for investigating dynein-mediated axonemal functions in respiratory health and left-right asymmetry development. Dynein Axonemal Light Chain 1 (encoded by DNAL1) is a critical component of the outer arm dynein (ODA) complex within cilia axonemes. It contributes to generating force for ciliary motility and regulates beat frequency through ATPase activity. The protein is proposed to function in a mechanosensory feedback mechanism by tethering the dynein heavy chain DNAH5 to microtubules, allowing adaptation to conformational cues. Located specifically in the cilium axoneme, DNAL1 is essential for proper airway ciliary function and for establishing nodal flow that determines left-right body asymmetry during development, with mutations linked to ciliopathies.